DOCUMENT RESUME

ED 410 084 RC 021 100

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TITLE Effective Dropout Prevention and College Attendance Programs for Latino Students.
SPONS AGENCY Office of Educational Research and Improvement (ED), Washington, DC.
PUB DATE Feb 97
NOTE 42p.; Paper presented at the Annual Meeting of the American Educational Research Association (Chicago, IL, March 1997). Written for the Hispanic Dropout Project.
CONTRACT R-117D-40005
PUB TYPE Information Analyses (070) -- Reports - Evaluative (142) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS College Attendance; *College Preparation; *College School Cooperation; *Dropout Prevention; Educational Research; *Educational Strategies; *High Risk Students; Higher Education; Hispanic Americans; Mexican American Education; Potential Dropouts; Poverty; Program Effectiveness; Program Evaluation; School Holding Power; Secondary Education; Secondary School Students; Socioeconomic Status
IDENTIFIERS AVID Program; Coca Cola Valued Youth Program; *Hispanic American Students; *Latinos; Student Support Services; Upward Bound

ABSTRACT

This paper reviews research related to effective secondary school programs aimed at dropout prevention and increasing college enrollment rates for at-risk Latino youth. The review identifies programs that have demonstrated a significant impact on dropout rates, college attendance, school performance, or related outcomes in rigorous evaluations; that are replicable across a broad range of secondary schools; and that have been successfully evaluated among or at least frequently applied to schools serving Latino students. Two dropout prevention programs and four college attendance programs were identified as meeting the criteria: the Coca-Cola Valued Youth Program, the Achievement for Latinos through Academic Success (ALAS) program, Upward Bound, SCORE, Project Advancement Via Individual Determination (AVID), and Project GRAD. Also included are brief analyses of nine college attendance/dropout prevention programs in California that did not meet the criteria of the review, but that are used on a fairly broad scale with Latino students. While successful program interventions vary considerably, common program themes include creating meaningful relationships between students and teachers and among students, connecting students to an attainable future, giving students help with specific courses as well as more generic study strategies, recognizing students for academic efforts, and providing activities to increase parental involvement. Contains 45 references and information on program contacts. (LP)

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ED 410 084

Effective Dropout Prevention and College Attendance Programs for Latino Students

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February, 1997

This paper was written for the Hispanic Dropout Project. It was partially supported by a grant from the Office of Educational Research and Improvement, U.S. Department of Education (Grant No. R-117D-40005). However, any opinions expressed do not necessarily represent the positions or policies of the U.S. Department of Education.

RC 021100

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A high school diploma is the minimum qualification for full participation in the U.S. economy. A worker without one can find work in only the most menial of occupations. The factory jobs that once allowed workers to make good incomes without a high school degree are diminishing, and the educational requirements for jobs in general are increasing. High school dropouts are seriously at risk. For example, they are four times more likely than high school graduates to be on welfare; 27% of dropouts, but only 6% of high school graduates who did not attend college are on welfare (NCES, 1996; ETS, 1996). Unemployment for workers over age 19 is twice as high for dropouts than for graduates (NCES, 1995b; Rumberger, 1987; Stern, Paik, Caterall, & Nakata, 1989).

For most segments of the U.S. population, high school graduation rates have been steadily increasing over the past two decades. Between 1972 and 1994, the white, non-Latino dropout rate (individuals ages 16-24 out of school without a degree) has diminished by more than a third, from 12.3% to 7.7%. The African-American dropout rate has diminished by more than 40%, from 21.3% to 12.6%. Yet the dropout rate among Latino students has always been high and has only slightly diminished. It was 34.3% in 1972, and 30.0% in 1994 (NCES, 1993b, 1996).

Why has the dropout rate among Latino students remained so high? Poverty is one explanation; dropout rates are strongly correlated with parents' socioeconomic status (NCES, 1996). Yet while the socioeconomic status of Latino families is similar to that of African-Americans, Latinos' dropout rates are now two-and-a-half times higher than those for African Americans, whose dropout rate is diminishing. Dropout rates for low-income Latinos are almost twice as high as for other low-income students, and among middle-income Latino students dropout rates are more than twice as high as that for other middle-income students. In fact, the dropout rate for middle-income Latinos (23.9%) is about the same as that for low-income African-Americans (24.5%) (NCES, 1995).

Recent immigration is another factor in high dropout rates for Latino students. Foreign-born Latinos are far more likely than other students to drop out (43%). Dropout rates for first-

generation (17%) and second-generation (24%) Latino students are still higher than those for all African-Americans (13%) and whites (8%). Language is another potential explanation, as students with limited English proficiency are more likely than others to drop out (Rumberger & Larson, 1995; Steinberg, Blinde, & Chan, 1984). Yet the high dropout rates (24%) for second-generation Latinos, who are presumably proficient in English, indicate that other factors must be at work. Fully English proficient Latino students also perform significantly below national norms (McArthur, 1993).

Low achievement is clearly a precursor of dropout, and Latino students do perform below national averages on most skills at all grade levels. However, test scores for Latino students are similar to those of African Americans, and their dropout rates are much higher.

It is important to note that dropout rates are not the same for all Latino subgroups. Mexican-American, Central American, Puerto Rican, and Dominican students have high dropout rates, while rates for students from Cuba and South America are closer to national averages (GAO, 1994).

The causes of the high dropout rate among Latinos are certainly complex. The individual factors that lead to dropouts among Latinos are similar to those for other groups: low achievement and disaffection with school, a desire to begin work early, and (for girls) early pregnancy (Fernández & Velez, 1989; Romo & Falbo, 1996). At the group level, some combination of problems with poverty, language, and recent immigration status probably interacts with factors relating to the poorly funded, overburdened, and insensitive schools that many Latinos in barrios and poor rural areas must attend (Mehan, 1996; Orfield & Monfort, 1988; Rumberger, 1995; Velez, 1989).

Whatever the precise reasons for Latino dropout may be, it is clear that this situation is intolerable. To have a segment of our population leaving school in such large numbers is an indictment of our schools and our society. Further, this segment is rapidly growing; Latinos were only six percent of our population as recently as 1980, have increased to nine percent today, and are projected to be almost a quarter of the U.S. population by 2050.

While it is obviously important to understand the causes and consequences of the Latino dropout rate, we cannot wait until the problem is completely understood to begin solving it. Over the past ten years a number of programs designed to affect dropout rates and related outcomes have been implemented and evaluated in middle and high schools serving many Latino students. Collectively, these studies show that schools can make a dramatic difference in the dropout rates, school success, and college enrollment rates of at-risk Latino youth.

The purpose of the present paper is to review research on programs of this kind. In a companion paper (Fashola, Slavin, Calderón, & Durán, 1996), we reviewed evaluations of elementary and middle school programs capable of enhancing the achievement of Latino students. Increasing student achievement and other indicators of school success is certainly one way of reducing dropout rates (see Ekstrom, Goertz, Pollack, & Rock, 1986; Finn, 1989). However, even with the best preventive programs, many students will still be at risk for dropout, and many will fail to achieve their full potential. Interventions are needed in secondary schools to increase the chances that students will stay in school, complete their high school degrees, and make a successful transition to post-secondary studies or to the workforce.

Dropout Prevention Approaches

The prevention of dropping out among students in general has been a high priority since the 1950's, when high school graduation first became a goal for all students. A wide range of programs have been implemented and evaluated in schools to reduce dropout rates. Increasingly, dropout prevention programs are explicitly focusing on increasing college attendance, as well as achievement and other outcomes.

There are many quite different approaches to dropout prevention, which are often used in combination or with different subgroups in the same schools. One approach is primary prevention, providing students with high quality elementary and middle school experiences to deal with the key precursors to dropout, low achievement, retention in grade, dislike of school, and related outcomes (see Fashola, Slavin, Calderón, & Durán, 1996). Of course, improving

student performance is of value in its own right, but as a dropout prevention strategy increasing school success at all levels is obviously important. Increasing the quality and attractiveness of the secondary curriculum is another obvious approach to dropout prevention. Secondary whole-school reforms intended to improve the achievement and social development of adolescents would be expected to affect dropout rates as well.

Other approaches to dropout prevention focus on identifying key hurdles to school success and helping students over them. For example, many approaches provide individual or small group tutoring to help students pass courses, especially such critical "gatekeeper" courses as algebra and English. After school, summer school, and Saturday programs are often provided to help students make it through their coursework (see, for example, Rumberger & Larson, 1994). Recognizing the strong correlation between truancy and dropout, many programs also focus on increasing student attendance.

A recurrent theme in many dropout prevention programs is the importance of personalizing the high school experience for at-risk students, with an expectation that increasing attachments to valued adults in the school or giving students high-status roles in the school will reduce disaffection and dropout. Various mentoring or counseling programs are built around this theme, as is the approach taken in at least a few programs of engaging young adolescents in prosocial activities such as tutoring younger children or volunteering in nursing homes.

Another theme in many dropout prevention programs is giving students a sense of purpose for completing school, in essence making the long-term consequences of high school completion and college attendance more apparent on a day-to-day basis. For example, many dropout prevention programs have a strong link to vocational education, part-time job placements, and internships in local businesses, both to maintain students' interests in school and to give them a clear picture of what life after school might be like and how a diploma helps in the real world (see Hayward & Tallmadge, 1995). Similarly, many programs designed to increase college attendance, including the widely used Upward Bound model, place students on college campuses during the summer to give them a realistic idea of what college life is like and a more

concrete experience of a potential future. An important variant of this approach involves providing college scholarships to students who meet certain standards of performance in high school.

Related to dropout prevention strategies are reentry or recovery programs, in which dropouts are encouraged to reenter high school or, more often, to attend special evening or weekend programs to enable them to finish their high school degree while they are working full time. GED programs are of course a variation on this theme.

Dropout prevention programs for Latino students are not very different from those for students in general. Accommodations are often made for Latino culture and for the language difficulties of students who are recent immigrants, but the great majority of Latino high school students are fully proficient in English. While this review primarily focuses on programs that have been researched and/or widely disseminated among Latino students, it is probably the case that effective dropout prevention programs for non-Latino students are likely to be effective for Latino students who are similar in other ways.

Focus of the Review

The focus of this review is on the identification of programs that have been shown to have a significant impact on dropouts, college attendance, school performance, or related outcomes in rigorous evaluations, that are replicable across a broad range of secondary schools, and that have been successfully evaluated among or at least frequently applied to schools serving many Latino students. There are many articles and books on the general principles of effective practice for Latino students and for bilingual education (e.g., Council of Chief State School Officers, 1990; Durán, 1994a, b; Vasquez, 1993; Losey; 1995; Howe, 1994; Leighton, Hightower, & Wrigley; 1995) and descriptions of outstanding secondary schools for Latino or bilingual students (e.g., Lockwood, 1996). The reader is encouraged to seek out these and other writings on effective practices. However, the focus of the present article is on specific strategies that schools could select to improve outcomes for Latino students. Other compendia list

promising programs (e.g., Leighton et al., 1995; National Diffusion Network, 1995), but unlike these, the present paper applies consistent standards to evaluate the likely effectiveness and replicability of programs available to educators committed to transforming secondary schools and classrooms to meet the needs of Latino students.

The criteria applied in this review are similar to those used in the Fashola et al. (1996) review of effective elementary and middle school programs for Latino students. They are described in the following sections.

1. Effectiveness

Programs were considered to be effective if evaluations compared students who participated in the program to similar students in matched comparison or control schools and found the program students to perform significantly better on fair measures of dropout, college attendance, or related measures of school success. Such evaluations were required to demonstrate that experimental and control students were initially equivalent on measures of academic performance, language proficiency, socioeconomic status, and other measures, and were similar in other ways.

2. Replicability

The best evidence that a program is replicable in other schools is an indication that it has in fact been replicated elsewhere, especially if there is evidence that the program was evaluated and found to be effective in sites beyond its initial pilot locations. The existence of an active dissemination effort, as would be true of most developer/disseminator projects funded by the National Diffusion Network (NDN) or most Title VII projects, is also a strong indication of replicability. Programs are considered low in replicability if they have been used in a small number of schools and appear to depend on conditions (e.g., charismatic principals, magnet schools, extraordinary resources) unlikely to exist on a significant scale elsewhere.

3. Evaluation or Application with Latino Students

Ideally, the programs emphasized in this review are ones that have been successfully evaluated in schools serving many Latino students. However, it would be foolish to exclude programs known to be effective with non-Latino populations if they have promise for Latino students. Therefore, programs were included if they had strong evidence of effectiveness and replicability and had been disseminated to schools with many Latino students, even if the reported evaluations did not include Latino students.

Literature Search Procedures

The broadest possible search was carried out for programs that had been evaluated and/or applied to Latino students. In addition to searches of the ERIC system and of education journals, we obtained reports on promising programs listed by the National Diffusion Network (NDN) and by Title VII grantees. Until its funding was phased out in 1996, the NDN was a part of the U.S. Department of Education that identified promising programs, disseminated information about them through a system of state facilitators, and provided "developer/disseminator" grants to help developers prepare their products for dissemination and then to carry out a dissemination plan. To be listed by NDN a program had to present evidence of effectiveness to a Program Effectiveness Panel (PEP), or formerly to the Joint Dissemination Review Panel (JDRP). PEP or JDRP panel members reviewed the data for educationally significant effects. However, the evaluation requirements for PEP/JDRP were low, and more than 500 programs of all kinds were approved, mostly on the basis of Pre-Post NCE-gain designs.

Selection for Review

Ideally, programs emphasized in this review would be those that were specifically designed for use with Latino students, present rigorous evaluation evidence in comparison to control groups showing significant and lasting impacts on dropout or related outcomes for Latino students, have active dissemination programs that have implemented the program in many

schools serving Latino students, and have evidence of effectiveness in dissemination sites, ideally from studies conducted by third parties. To require all of these conditions would overly limit this review. To include a much broader range of programs, we have had to compromise on one or more criteria. For example, we have included programs with excellent data that show positive effects for Latino students even if the program has not been widely replicated (as long as there is no obvious reason it could not be replicated). We have included programs with excellent outcome data and evidence of replicability with non-Latino students if the program has been replicated in areas with large Latino populations. We have included programs with shakier evidence of effectiveness if they are particularly well-known, widely replicated, and appropriate to the needs of Latino students. In other words, our listing a program in this review is not necessarily a statement that we believe the program to be highly effective, replicable, and uniquely adapted to the needs of Latino students. Instead, it is an indication that among many dropout prevention programs we could have mentioned, these were the ones we felt to be most appropriate to be considered by secondary schools serving many Latino students. Following detailed discussions of the programs and their evaluations, Table I summarizes the degree to which each program reviewed meets our ideal criteria. We have tried to present the evidence that school and district staff would need to begin a process leading to an informed choice from among effective and promising programs capable of being replicated in their settings.

Program Types

Six programs met the inclusion criteria included in this review. These programs (as well as many others that did not meet our standards) fall into two major categories. The first is programs designed to work with the most at-risk students in middle, junior high, or high school to keep them from dropping out. The second category is programs designed to increase the college attendance rates (or college eligibility) of students who may show promise but are at risk of not fulfilling their promise. The college attendance programs also emphasize dropout prevention as a goal, and programs designed strictly as dropout prevention models often report

college attendance or eligibility as a valued outcome, but there is a clear distinction in practice between the two types of programs in terms of their emphasis on helping students to take and pass courses that lead to college, familiarizing students with college, assisting students with financial aid applications, and in one case (Project GRAD) actually providing college scholarships. In addition to the program that did meet our evaluation criteria, we also discuss a few additional programs that did not, but that are nonetheless of interest.

Dropout Prevention Programs

Two programs primarily designed to increase the high school graduation rates of at-risk Latino students met the standards of this review: The Coca-Cola Valued Youth Program (VYP) and ALAS (Achievement for Latinos through Academic Success).

The Coca Cola Valued Youth Program

The Coca Cola Valued Youth Program (1991) is a cross-age tutoring program designed to increase the self-esteem and school success of at-risk middle and high school students by placing them in positions of responsibility as tutors of younger elementary school students. The Valued Youth Program was originally developed by the Intercultural Development Research Association in San Antonio, Texas. The original implementation of the program was funded by Coca Cola, and implemented in collaboration with five school districts in San Antonio between 1984 and 1988, with approximately 525 high school tutors and 1575 elementary tutees.

The overall goal of the program is to reduce the dropout rates of at-risk students by improving their self concepts and academic skills. This is done by making them tutors, and providing assistance with basic academic skills. The program also emphasizes elimination of non-academic and disciplinary factors that contribute to dropping out. For example, it attempts to develop students' senses of self-control, decrease student truancy, and reduce disciplinary referrals. It also seeks to form home-school partnerships to increase the level of support available to students.

The first goals of improvement of academic skills is met when students agree to serve as tutors. The tutors are required to enroll in a special tutoring class, which allows them to improve their own basic academic skills as well as their tutoring skills. The students who are involved as tutors are paid a minimum wage stipend. The tutors work with three elementary students at a time for a total of about four hours per week. They are taught to develop self awareness and pride, which is expected to make them less likely to exhibit disciplinary problems.

Functions are held to honor and recognize the tutors as role models. They receive t-shirts, caps, and certificates of merit for their efforts.

The main evaluation of the Coca Cola Valued Youth Program compared 63 VYP tutors to 70 students in a comparison group (Cardenas, Montecel, Supik, & Harris, 1992). The students in four San Antonio schools were matched on the basis of age, ethnicity, lunch eligibility, percentage of students retained in grade, and scores on tests of reading, quality of school life, and self concept. They were selected (not randomly) into the experimental group based on scheduling and availability, and then the remaining students were placed into the comparison group. Nearly all students in both groups were Latino and limited English proficient. The control students were somewhat less likely to qualify for free lunch or to have been retained in grade.

Two years after the program began, 12% of the comparison students but only 1% of the VYP students had dropped out. Reading grades were significantly higher for the VYP group, as were scores on a self-esteem measure and on a measure of attitude towards school.

The VYP has been widely replicated throughout the Southwest and elsewhere. In 1990, additional funding was provided by Coca Cola for sites in California, Florida, New York, and Texas, and the program is now being extended to schools in Idaho, Oregon, and Montana and other schools across the country.

ALAS

Achievement for Latinos through Academic Success (ALAS; Larson & Rumberger, 1995) is a dropout prevention program for high risk middle or junior high school Latino students, particularly Mexican American students from high-poverty neighborhoods. This program focuses on youth with learning and emotional/behavioral disabilities using a collaborative approach across multiple spheres of influence; home, school, and community.

Students served in the program came from Los Angeles communities where there were approximately 83% Latino, 1% Black, and 15% Anglo, and 1% other races, in neighborhoods with high rates of crime, drug use, and gang activity.

The intervention addressed three major forces that influence the life of the adolescent; family, community, and school. Students were provided with social problem solving training, counseling, and recognition for academic excellence. School strategies included remediating the students' deficient social and task-related problem solving skills, maintaining intensive attendance monitoring, providing recognition and bonding activities for the participants, and providing frequent teacher feedback to the parent and the student. Family strategies included use of community resources, parent training in school participation, and training to guide and monitor adolescents. Parents were offered workshops on school participation and teen behavior management. The program also focused on integrating school and home needs with community services, and advocating for the student and parent when necessary. Community strategies included enhancement of collaboration among community agencies for youth and family services, and enhancement of skills and methods for serving the youth and family.

ALAS was evaluated in a junior high school that was 96% Latino, 2% Anglo, and 2% African-American with 70% of the students in the school participating in the school lunch program. Of the cohort of students who entered the 7th grade in 1990, 62% spoke English as a first language, 60% remained in school for grades 7, 8, and 9, and only 65% of these students had earned enough high school credits in the 9th grade.

ALAS served the most at-risk students in the school. Students who fit this category were identified in one of two ways. One group of students had had an active Individual Education Plan (IEP) from 6th grade, identifying them as learning disabled or severely emotionally disabled using state and federal guidelines. These students are referred to as the Special Education (SE) group. Students with IEPs who entered the seventh grade during fall of 1990 (the first year of implementation) were placed in the special education treatment group 1 (SE1, n=33). Students with IEPs who entered the seventh grade during fall of 1991 (the second year of implementation) were placed in the special education treatment group 2 (SE2, n=44). Students with IEPs who entered the seventh grade during the third year of the study were placed in the special education control group (SEC, n=55).

Students in the second category were those who were not formally identified for special education, but who exhibited characteristics that placed them at risk for dropping out of school. These students were identified using a 6-item teacher rating scale that evaluated students' level of functioning based upon level of motivation, academic potential, social interaction skill, difficulty to teach, and need for special education services. Students in this group were classified as High Risk (HR) if they rated below average on 4 or more of the 6 categories. Students who spoke no English were excluded from the study. Students who qualified as high risk were randomly assigned to one of two groups. The first group of at-risk students consisted of the high risk seventh grade students who entered the 7th grade in the fall of 1990 and received the ALAS treatment (HRT, n=46). The second group consisted of the high risk seventh grade students who did not receive the ALAS treatment, but served as a control group (HRC, n=48). A low-risk group was also assessed to provide an additional point of comparison. This group of students fit the demographic descriptions of students receiving ALAS.

The full impact of the program was not supposed to have taken effect until the children had been in the program for at least two years. Results were reported at the end of the ninth grade, and follow-up assessment was done at the end of the eleventh grade.

In this study, "dropout" was defined as not being enrolled in school during the last 20 days of ninth grade, with no requests for student records from another school. Among the special education samples, the second cohort (SE2) had the lowest dropout rate (2%). This was significantly lower than the other two groups. The first special education cohort (SE1) experienced a 12% dropout rate, and while this was less than the dropout rate for the special education control group (16%), the difference was not statistically significant.

Among the high risk groups, the ALAS students had a much lower dropout rate (2.2%) than the high risk control group (16.7%). The rate for the high risk treatment group was even lower than that for the low-risk comparison group (5.1%). In summary, the ALAS program worked well for the students in the treatment groups, and especially well for students in the second special education cohort and the high risk group. The attrition rates (dropouts plus transfers to other schools) were also lower for the treatment groups than they were for the control groups.

Another variable measured was the number of high school credits earned by the students in the various groups, defined as accumulating enough units by the end of the ninth grade (including summer) to be on track to graduate from high school in four or five years.

Among the special education cohorts, 54% of the first cohort and 70% of the second cohort had accumulated enough units to graduate, compared to 30% of the special education control group. More of the low risk students (70%) earned their high school credits than any of the at-risk groups. More of the high risk treatment (56%) students than the high risk control (45%) students had enough credits.

ALAS also measured recovery rates as the percentage of students who left the school who then returned. This was another measure of the "holding power" of the ALAS program. Students with the highest recovery rates were those in the treatment groups. Special education cohort 1 (SE1) had a 47% recovery rate, while special education cohort 2 (SE2) had a 33% recovery rate. The special education control group had a 4% recovery rate. The high risk

treatment group (HRT) had a 41% recovery rate, the high risk control group had a 4% recovery rate, and the low-risk control group had a 21% recovery rate.

Attendance was measured as the percent of students absent more than 25% of the time. Among the special education groups, SE1 had slightly fewer students with many absences (40%) than the SEC (43%), but this difference was not significant. The second special education cohort had significantly fewer students with many absences (19%) than either of the other special education groups. The high risk treatment group had a lower (15%) absenteeism rate than the high risk control group (38%).

Another measure of academic progress was the percentage of Fs received by the students in six classes in all of the groups. At the end of the ninth grade, the smallest average percentage of failures occurred among the SE2 group (7.3%), followed closely by the SE1 students (8.25%), and then the high risk treatment group (8.62%). The two control groups had substantially higher numbers of failures (19.24% for HRC and 20.25% for SEC).

In summary, the groups that benefited the most from ALAS through the end of the 9th grade were the special education second cohort and the high risk treatment group.

A long-term evaluation of some of the study variables was also done on the initial ALAS cohorts, including the special education cohort 1 (SE1), the high risk treatment cohort (HRT), the high risk control group (HRC), and the low risk control group (LRC).

The first variable followed was the number of high school credits earned by the students. By the eleventh grade, although students in the two treatment groups (SE1 and HRT) had more credits than those in the high risk control group, this difference was not significant, and all had fewer credits than the low risk control group. Comparing the high risk treatment and the high risk control students in terms of whether they had sufficient credits to graduate in one or two years, the high risk treatment group had more students qualifying in both cases (33% compared to 25.9% were on track to graduate in no more than one year, and 66.7% compared to 51.9% were on track to graduate in no more than two years). However, the differences between the two groups were not significant.

ALAS has not been disseminated beyond its pilot sites, but provides one effective and well-evaluated model for increasing the school successes and persistence of at-risk Latino students.

College Attendance Programs

Four programs designed to increase the college attendance rates of Latino students met the standards of this review: Upward Bound, SCORE, AVID, and GRAD. In each of these, reducing dropout and increasing academic achievement (among other outcomes) were also important program goals, but these programs are distinctive in their focus on ensuring that promising Latino and other minority students do what is necessary to attend college.

Upward Bound

The U.S. Department of Education administers a set of six college entrance programs whose main goal is to increase the number of first generation low socioeconomic status students attending college by providing them with academic skills and additional resources that they may need in order to make them college eligible. The programs, collectively referred to as TRIO, include Upward Bound, Talent Search, Student Support Services, Educational Opportunity Centers, Training Program for Special Services Staff and Leadership Personnel, and the Ronald McNair Post-Baccaulaureate Achievement program.

Upward Bound is the oldest and largest of the TRIO programs, and it has been evaluated the most thoroughly. Upward Bound targets 13- to 19- year-old students whose family income is under 150% of the poverty level, and/or students who are potential first generation college students. To be eligible for Upward Bound, students must have completed the eighth grade, met the socio-economic criteria, and plan to attend college. Students are usually recommended into the program by a guidance or academic counselor. Students with behavioral and emotional problems are usually screened out of the pool of applicants.

Once enrolled in Upward Bound, students are provided extra instruction, usually after school and on Saturdays, in mathematics, laboratory science, foreign language, English, and composition, and are also provided with instruction in study skills, academic or personal counseling, exposure to cultural events, tutorial services, information about financial assistance opportunities in college, and advice on a range of career options. Students are also provided with an intensive 6-week summer academic residential or nonresidential program at a college campus.

The first comprehensive evaluation of Upward Bound was done by Burkheimer, Levinsohn, Koo, & French, (1976), and followed up by Burkheimer, Riccobono, and Wisenbaker (1979). This evaluation investigated the high school retention rates of UB students, the rate of entry of UB students into post-secondary institutions, and Upward Bound's effectiveness in helping students to attain skills and motivation necessary for post-secondary success.

The experimental design consisted of matched comparison groups, comparing 3,710 UB students and 2,340 comparison students in the 10^{th}, 11^{th}, and 12^{th} grades who attended the same schools as. Students in the two groups were matched on grade level, ethnicity, low-income status, and academic risk status. Data were collected using questionnaires, interviews, and student records.

Based on fall to spring high school continuance rates, UB participants remained in high school at a rate slightly higher than that of the comparison group students. The difference was significant in the tenth and eleventh grades, but not twelfth. Evidence also suggested that the longer the students were involved in the program, the higher their rate of school continuance. Fall to fall high school continuance rates were lower for both groups, but the UB students still showed a higher continuation rate in grade 10, but not in grade 11 or 12.

The UB students entered institutions of post secondary education (PSE) at a higher rate than the comparison students. UB had a greater percentage of high school graduates who were eligible to attend college (71%) than did the comparison group (47%), and 65% of the college eligible UB students attended PSE institutions versus 43% of the control group.

UB students involved in the program the longest benefited the most from the program. Students who had participated in UB for three years had a 78% college attendance rate; those who had participated in UB for two years had a 69% college attendance rate; and those who had participated for one year had a 68% college attendance rate.

The most recent evaluation of Upward Bound was done by Mathematica Policy Research, Inc. This evaluation, currently under way, has produced an initial report focusing on the short-term academic impact of UB on students during the first two years of high school. Secondary questions answered by the evaluation included the length of students' participation in UB, attrition rates in UB, reasons for leaving the program, what types of students benefited from UB services, and the types of services provided by UB.

A pool of potential participants was collected by asking students across the country to complete UB applications and also to complete a questionnaire that asked about family background, attitudes and expectations, and school experiences. A follow-up survey updated their school related experiences, attitudes, and expectations. Data from high school transcripts were also used in the selection process. Eligible participants from 67 sites participating in UB were then selected and randomly assigned to an Upward Bound group (1,481 students) or a control group (1,266 students).

Overall, the students in this study were mostly female (70%) and African American (53%). Latinos (25%) made up 25% of the sample; other participants included Caucasian (20%), Asian (5%), and Native American (5%) students.

Of the students invited to participate in Upward Bound, 20% chose not to join. Many students did not participate in the program because they had taken jobs, had problems with transportation, family issues, or time conflicts. Latino and Asian students were more likely to participate when invited than were African American students, and younger students were also more likely to participate than were older students.

Of the students who joined the program, about 40% dropped out of it. Students who planned to complete less than a baccalaureate degree were more likely to drop out of the

program, as were students who took jobs. African-American students were more likely to leave UB than members of other ethnic groups.

Analyses of UB showed that the UB participants earned more academic credits during high school, particularly in English, social studies, and science, than the control group. Of the students who remained in the study, UB participants received considerably more academic preparation and support for college than did students in the control group. They were also more likely to take courses such as English, mathematics, and science.

As in the previous study (Burkheimer et al, 1979), length of time in the program was an important factor. Participants who had been involved in UB for longer periods of time earned more credits in high school than did other students. Grade point averages, attitudes about high school, and parental involvement were not affected by participation in Upward Bound. Students' expectations and attitudes toward future success, however, decreased significantly less than those of the control group, but they decreased nonetheless, while their parents' expectations increased. Grade point averages for the two groups remained the same, even though the UB counterparts in the control groups were not required to take academic courses and were less likely to do so than were the UB students. In other words, the Upward Bound students were receiving equivalent grades in more difficult classes.

UB students earned more academic credits for their courses in science, mathematics, English, foreign languages, and social studies as well as more vocational education credits and more remedial mathematics credits, than did their counterparts, and all of these differences were statistically significant.

The impact of UB was greater for Latino students who had entered the program with low expectations than for any of the other student participants. Latino UB participants increased their academic coursework by two credits each year; African American and white students increased their academic loads by less than .5 credits. Evidence showed that almost all of the African American and white students, but only 87% of Latino students would have participated in an academic curriculum regardless of UB.

Examining preliminary long-term results of UB, MPR showed high rates of college entrance, but low rates of student persistence in college. Of the UB students entering college, those with lower expectations of college completion were also more likely to drop out.

Overall, one of the main limitations of this study was the UB attrition problem (which the program acknowledges). As noted before, 20% of the students selected did not enter the program, and another 40% of those who entered dropped out of it. This means that of the students evaluated, only about 50% of the students received the entire twelve month program.

Another limitation of the study is its difficulty in identifying a truly untreated control group. Some of the control group students may still have had access to the same or similar types of services as the UB students. The authors state that more than 40% of the students in the control group received similar services, such as Talent Search (which is another TRIO program).

After the initial evaluation of UB (Burkheimer et al., 1979), the program strengthened its academic component, and added more enrichment courses to the summer program. At this time also, UB existed more at 4-year institutions than at 2-year institutions. Since then, UB has expanded such that there is a significant number of UBs at 2-year institutions. Due to funding problems at the community college level, many 2-year institutions that provide UB services do not offer the 6-week summer program. Thus, it would be interesting to compare the academic achievement of Upward Bound students at two-year institutions to those attending four year institutions.

Although Upward Bound is funded federally, it is operated at local public and private institutions of higher education, two year as well as four year. The funding cycle for Upward Bound programs is generally three years, although the program is usually continuous at any given site. Upward Bound began in 1967, and now it serves about 42,000 pre-collegiate students with a budget of $162.5 million.

SCORE

SCORE (Johnson, 1983) is a dropout prevention/college preparatory program that was initially developed as a partnership between the Orange County (CA) Department of Education and the University of California at Irvine. This program targets at-risk students in grades 9-12 whose likelihood of graduating from high school or enrolling in college is felt to be low by their teachers. SCORE equips its student participants with the tools that they need to stay in high school and to attend college by providing them with a set of comprehensive services. These services can be separated into five components, which are adapted to the needs of each school.

First, students receive professional career counseling from a SCORE guidance counselor, who helps work through any obstacles preventing them from meeting their professional goals. Second, students receive tutoring in various subjects and instruction in study skills from SCORE teachers. The third component of SCORE focuses on motivation. SCORE students are given opportunities to join various clubs, in which they work together and provide one another with motivational support. Fourth, a parent program that helps parents to support their children's academic success. The final component is a summer academic program, in which students take courses ranging from college preparatory courses to actual college courses to remedial courses. For Latino and other students with limited English proficiency, SCORE focuses on moving students out of separate ESL classes into the mainstream.

Schools that initially intend to implement SCORE attend a 3-day workshop to discuss school-wide changes that will need to be in place for implementation. Next, study skills teachers are chosen, and they participate in a 2-day workshop, after which the program is adapted to fit the needs of the specific school. At the end of the implementation year, the program is re-evaluated to see whatever changes (if any) need to be made for the following year.

The first evaluations of SCORE (SCORE, 1981) involved comparing University of California eligibility rates of the first group of SCORE students with those of the state of California. U.C. eligibility rates for SCORE students were 40%, compared to a random sample of high school African-American and Latino graduate students surveyed by the California Post-

Secondary Education Council (CPEC) of 5.2%. SCORE students also enrolled at a higher rate (41%) in four year colleges than did a selected comparison group of minority high school graduates, also surveyed by CPEC (11%). The next portion of this evaluation compared the effects of partial implementation of SCORE to full implementation. Students who received less than all five components of SCORE had a 32% college enrollment rate, whereas those who had had all five components and attended all sessions (especially including the summer institute) had a 56% college enrollment rate. The last part of this comparison included matching 99 SCORE seniors from a school that was 43% Latino with 112 students from a matched control school that also had a 43% Latino population. All (100%) of the SCORE students completed their college requirements, compared to 52% of the students in the comparison sample.

The SCORE program published anecdotal reports on four schools with substantial but varying proportions of Latino students (SCORE, 1994).

The first school, in Gonzales, California, consisted of 1200 students, of whom 45% were migrant. Prior to adopting SCORE in 1983, 3% of the high school graduates had completed the requirements to enroll in a university. With the adoption of SCORE, the figures steadily increased until they reached 28% in 1990. Migrant students from Gonzales High School enrolled in 4 year colleges and universities at a much higher rate (51%) than the national migrant average (5%). The number of SCORE student enrolled in intermediate algebra also rose from 42 to 119 and from 12 to 63 in other mathematics courses. Chemistry and physics enrollment also increased from 60 in 1987 to 175 in 1992.

The second school, in Madera, CA, was 100% Latino, and all of the students were involved in migrant education. When they initially entered the school, many of the students were limited English proficient. Upon graduation, 93% of the LEP students tested as fully English proficient. After participating in SCORE, 90% of the migrant students who participated attended college. 100% of the students who graduated attended either four or two year colleges. Some of the students dropped out as a result of financial issues, but none because of academic problems.

Students in a school in Buena Park, CA, who had been selected into SCORE were those who had scored in the bottom quartile on the CTBS, and therefore qualified as Title I students. This group made up 69% of the total freshman class. The percentage of graduates who attended four year colleges went up from 22% to 31%. While in college, all of the SCORE graduates maintained a 2.8 GPA in their college prep curriculum during their freshman year. All limited English proficient students were also fully English proficient at the end of the freshman year, and maintained a "B" GPA through their senior year in high school. Buena Park High School eliminated remedial mathematics, instituted algebra for most ninth grade students, and then heterogeneously grouped all social science classes. The dropout rates decreased from 3.3 to 2.3.

The final school, in Stockton, CA, had a heterogeneous mix of students. Here SCORE is mainly an after-school tutorial program, using teachers who tutor in their classrooms one to four days per week. Since the adoption of SCORE, elective enrollment in college preparatory classes increased 84% from the previous year. The number of students who took the SAT also increased from 11 in 1982 to 110 in 1993. The number of advanced placement English classes also increased from one to six, and most recently, the school has adopted an international baccalaureate program. The number of students who dropped out decreased from 141 in 1988 to 71 in 1992.

The evaluations of SCORE are far from ideal in experimental design. Most of the statistics presented for SCORE students are anecdotal; different outcomes, presumably those showing the most impressive gains, are reported for each school. The first study compared SCORE students to California averages for minority students, without any evidence that the SCORE students were similar in other ways to California averages. However, the changes over time in dropout and college enrollment rates are large, and have been shown in many schools. It seems likely that SCORE is in fact having an important impact on the graduation and college enrollment rates of Latino as well as non-Latino students.

SCORE is currently used in several schools in Southern California, and is being expanded through a process of training trainers in new schools and districts.

Project AVID

Project Advancement Via Individual Determination (Mehan et al., 1992; Swanson, Mehan, & Hubbard, 1995) is a high school dropout prevention /college enrollment program that began in San Diego County, California in 1981. In AVID, low-achieving students felt to have good academic potential are placed in rigorous college prep courses, and are taught to excel academically. The program began as a means of improving the academic achievement of minority students who were being bussed into a predominantly white suburban high school in San Diego County.

When schools initially agree to become AVID schools, a leadership team made up of the school principal, head counselor, AVID teacher, and the leaders in English, foreign languages, history, science, and mathematics attend a week long summer training institute. Follow-up training is also provided in the form of monthly workshops by the AVID lead teachers, semi-annual site team meetings and site visitations by the AVID county staff, and quarterly tutor and parent workshops.

The main backbone of the AVID program is the lead teacher/coordinator. She/he acts as a coach, constantly expecting the best academic performances from both the teachers and the students. The AVID lead teacher/coordinator is also responsible for training and hiring professionals and paraprofessionals such as tutors to work with the students in the program. The lead teachers raise funds for the program, and are involved in the coordination and planning of field trips.

Students who participate in AVID are selected into the program by AVID coordinators. Eligibility requirements include average to high CTBS scores, but low junior high school grades, as well as parental consent. Once the students enter the program they enroll in AVID classes, where they are taught such strategies as inquiry, writing, and higher order thinking skills. They are also provided academic assistance and tutoring in their regular subjects during the AVID class hours. Sometimes, some of the AVID students themselves are the tutors.

Students participate in AVID activities during lunch, recess, elective periods, and after school. They may be given AVID notebooks which are used to take "AVID style notes," and AVID badges or ribbons. Some schools engage students in printing a special AVID newspaper that discusses AVID student successes.

In the most recent evaluation of AVID, Mehan, Villanueva, Hubbard, & Lintz (1996) compared the school records of 248 students who had participated in AVID for three years (AVID3) in 1990-1992 with those of 146 students who had also met the criteria for AVID and initially participated in the program for a year, but then dropped out (AVID1). Students' records were from 14 AVID schools in San Diego county, with Latino compositions ranging from 8% to 37%. The original number of students in each group was 353 for the AVID3 students and 288 for the AVID1 students, and the number of Latino students who participated in the follow-up interviews was 102 in the AVID3 group and 40 for the AVID1 group. The two groups were fairly equal in socioeconomic status. AVID3 students, 71% came from homes whose families made under $40,000 per annum, as opposed to 65% of the AVID1 students.

Analyses comparing AVID3 and AVID1 divided students into three groups. The first group (high) consisted of students who had high CTBS scores and high grades, or middle CTBS scores and high grades. In this group, there were 37 (25%) AVID1 students, and 72 (29%) AVID3 students. The second group (middle) consisted of students who had high CTBS scores and middle level grades, or middle level scores and middle level grades. The middle group consisted of 77 (53%) AVID1 students and 140 (56%) AVID3 students. The final group (low) consisted of students who had both low grades and low CTBS scores. This group consisted of 32 (22%) AVID1 and 36 (15%) AVID3 students.

The college enrollment rates of the two AVID groups were compared to those of the San Diego County high school population, and to those of the U.S. population. Comparisons of these four groups showed that AVID students had a greater rate of attending 4-year institutions, followed by AVID1 students. Looking specifically at the Latino students, who comprised the majority of the students in the study, 43% attended 4-year institutions, compared to the San

Diego County rate of 25%, and the AVID1 rate of 20%. Interestingly, 43% of the AVID3 graduates attended 2 year colleges, compared to 40% of the AVID1 students, and 37% of the county population, and 14% of the AVID3 students were engaged in work right after high school, compared to 38% of the county population and 40% of the AVID1 population. Comparing the AVID1 and AVID3 groups on attempting and actually completing college preparation classes to make them eligible for the University of California or the California State University system, the differences favored the AVID3 group. In the high AVID1 group, 78% of the students attempted college preparation courses and 62% of them completed these courses, compared to the AVID3 group, where 85% of the students attempted the courses and 67% completed them. For the middle students, there was a similar pattern. For the AVID1 middle group, 42% of the students attempted the courses, and 14% of them completed the courses, compared to 68% of the middle AVID3 students who attempted the courses and 23% who actually completed them. The largest impact of participating in this program shows up in the low groups.

For the AVID1 low group, 22% of the students attempted the college level courses, and none of them completed the courses, compared to 53% of the low AVID3 students who attempted the courses and 11% who actually completed them.

The advantage of AVID3 over AVID1 participants was greatest for students whose parents had not completed high school (44% for AVID3 versus 17% for AVID1). There was a smaller but still important difference for students whose parents were high school graduates (51% for AVID3 versus 39% for AVID1) and for students whose parents had a bachelor's degree or more (48% for AVID3 versus 39% for AVID1).

Overall, these results suggest that AVID had some positive effects on the students who needed it most. It is important to note that the Mehan et al. (1996) study, while it uses a comparison group, still presents issues of concern, and does not meet the standards of this review. First, the AVID1 and AVID3 groups cannot be considered comparable, as the AVID3 students were able to remain in this rigorous program for all three years while the AVID1

students dropped out. It is likely that the AVID3 students were therefore more motivated, higher achieving, and better behaved than the AVID1 students. Comparison of both AVID groups to San Diego County and U.S. means are even more susceptible to bias. Students are specially selected for AVID based on high CTBS scores and other indications of promise, and some number of students do not even make it to the end of the first year (and are therefore not included in either group). Still, the college enrollment rates for AVID are impressive, and the program has a good track record in serving Latino as well as non-Latino students throughout the U.S., and for these reasons is worthy of consideration by other schools serving many students placed at risk.

AVID now exists in fifty high schools in San Diego County, and 84 high schools outside the county.

Project GRAD

Project GRAD (Graduation Really Achieves Dreams) (Ketelsen, 1994) is a comprehensive dropout prevention/college attendance program developed and evaluated at Jefferson Davis High School, which serves a population that is 83% Latino and very low in socioeconomic status. It was begun in 1989 by a former CEO of Tenneco, James Ketelsen, in collaboration with the University of Houston. Tenneco and other funders promised any student who graduated on time from Jefferson Davis with a GPA of 2.5 a four-year, $1000 per year college scholarship. Students were provided with two five-week summer academic institutes held at the University of Houston, opportunities to participate in paid internships in local businesses, and interventions to improve schoolwide discipline, parent involvement, and quality of instruction. An evaluation of Project GRAD compared the entire school population in 1989, before the program began, with those in 1993 (Ketelsen, 1994). Over that time period, the percentage of students graduating in four years rose from 50% to 78%. College attendance rose from 10% of all graduates to 60%. The pass rate on the 11th grade Texas Assessment of

Academic Skills (TAAS) increased from 37% to 86% and the number of students enrolled in honors courses doubled.

A more recent comparison of Project GRAD to a control school (Opuni, 1995) showed less impressive outcomes in terms of graduation rates and academic achievement, but continued to show substantial gains in college attendance. Annual dropout rates at Jefferson Davis dropped from 18% in 1988-1989 to 11.5% in 1994-95, but similar reductions were also found in the comparison schools and in other Houston high schools. Only small differences (favoring Davis) were found in on-time graduation rates, and there were no differences on academic achievement measures. However, among students who did graduate, college attendance rates increased from 20% in 1988-89 to 41% who attended college immediately after high school and 56% who eventually did so. This is more impressive as the total population of students graduating was also increasing over this time period. Because of the disappointing findings with respect to achievement and dropout, however, the project is adding interventions relating to achievement, discipline, and attendance in the entire feeder system that leads to Davis High (Ketelson, 1994).

At present, Project GRAD only exists at its original site, but there are plans to expand it to additional high schools within and beyond Houston.

CPEC Program Evaluations.

In 1992, the California Post Secondary Education Commission (CPEC) conducted an evaluation of nine college attendance/dropout prevention programs around the state of California (Edgert & Taylor, 1992). The programs reviewed shared a common goal: Increasing the number of ethnic minority students enrolling in post-secondary institutions. All of them serve many Latino students. Yet the programs differed in the regions served, specificity of program missions, components and services, demographics of schools served, and administering agencies.

This section of the paper provides a brief descriptive analysis of these programs. Some of the programs, such as MESA, are national programs whose California component was evaluated in the CPEC report. Others, such as Cal-SOAP, are local California-created programs

that have not been replicated elsewhere. All of the programs serve significant numbers of Latino students.

The evidence of effectiveness provided by the programs reviewed by CPEC did not meet our evaluation criteria. First, although some of the programs had pre-post, experimental-control comparisons, they did not establish the equivalence of the experimental and control group before the treatments were introduced. Most of the programs had selection criteria for entry into the program (for example, test scores or enrollment in college-preparatory classes), but the comparison groups were not selected in the same way. Some simply compared outcomes to those of "all" high school students across the U.S. (or all minority students). Second, even in cases where students in a given grade cohort were compared to those in a previous cohort, no evidence was given to show that the two cohorts were initially equivalent. While we cannot say that the CPEC programs are proven to be effective. They are all used on a fairly broad scale with Latino students, and for this reason we do provide descriptive information about them.

Mathematics Enrichment and Science Achievement (MESA) is a program created by the University of California in 1970, out of concern among educators about the small number of African-American and Mexican-American college graduates in engineering. The mission of the program is to develop academic and leadership skills, raise educational expectations, and instill confidence in students from backgrounds historically underrepresented in fields such as engineering, physical science, and other math-based fields. MESA strives to accomplish this goal by creating partnerships among staff, advisors, committed middle and high school science and math teachers, school district officials, university professors and administrators, industry members, and parents.

The main component of MESA that focuses on college enrollment is the Mesa Schools Program (MSP). MSP is specially designed to support pre-college students by providing them with extra academic assistance in middle and high school to prepare them to succeed in the sciences and in mathematics-related fields in high school and college. The MSP begins in the

seventh grade, so students could be involved in the program for as long as six years (grades 7-12).

To be eligible for the MSP middle school program, students must meet certain academic criteria: They must score between the 40th and 90th percentiles on the CTBS, they must be interested in math-based fields, and they must be likely to complete algebra in the 9th grade. To be involved in the MESA senior high school program, students must be involved in college preparatory mathematics or science classes, interested in mathematics-based fields, and able to take the A-F (college preparatory) course pattern.

Students enrolled in MSP are provided with services such as meetings, MESA (MSP) classes, college advising, school course counseling, academic assistance, science workshops, math workshops, PSAT/SAT workshops and preparations, visits to campuses, motivational speeches made by individuals from the private sector and post-secondary educational institutions, participation in science fairs, skill development classes, tutoring, a summer program, recognition awards such as scholarships, and field trips that include visits to business and industry.

Currently there are MESA centers at 48 sites throughout California, which serve over 20,000 students. In California, MESA serves a student population that is 60% Latino. The MSP component of MESA has 20 centers that serve over 250 middle, junior, and senior high schools. Hundreds of MESA and MSP centers also exist elsewhere in the U.S.

Alliance for Collaborative Change in Education School Systems (ACCESS) is a college enrollment program that works with the San Francisco and Berkeley school districts. ACCESS began at the University of California, Berkeley, in 1980, as a Chancellor's initiative to improve neighboring secondary schools' ability to prepare underrepresented students for college. ACCESS strives to improve curricular, instructional, and organizational components of the school, focusing on mathematics, English, and counseling.

Using site-based management in areas such as staff development and technical assistance, teachers are taught to improve their curriculum, instructional standards, counseling expectations, and leadership and school organization. Although ACCESS has specific structural components, it is generally adaptable to the needs of the school.

When enrolled in ACCESS, students receive tutoring, academic/college advising, and in-class instruction in specific curricular areas. ACCESS begins in the sixth grade, and continues until the twelfth grade, so students can potentially be involved in ACCESS for seven years. Middle school participants eligible for ACCESS are all students enrolled in mathematics and English courses. High school students eligible to become ACCESS participants are those enrolled in college preparatory mathematics and/or English courses at sites receiving ACCESS assistance for teachers, counselors, and administrators. ACCESS students are required to complete college preparatory (A-F) course requirements, and are given extra assistance to help them to improve their standardized test performances.

California Academic Partnership Program (CAPP) is a college attendance program administered by the California State University system. The program creates partnerships among school districts, colleges, and universities to improve learning opportunities and academic preparation for middle and high school students, so that they are better prepared to attend and graduate from college. CAPP strives to achieve its goal by providing schools at various levels (colleges, universities, and middle and high schools) with grants that allow them to work together to create academic and professional development opportunities to improve the college preparation of all students

In order to be involved in CAPP, students must be enrolled in pre-college or college preparatory courses in English, mathematics, science, social sciences, or foreign language. They are provided with services such as advising, visits to campuses that they might attend, parental involvement in their education, tutoring, and summer programs. Unlike many of the programs in

this report, CAPP exists at a given site for only three years, and then the program leaves the site, so students typically participate in CAPP for two to three years.

CAPP currently exists in fifteen school districts in the State of California, on six community college campuses, six California State University campuses, three University of California campuses, and two additional independent institutions.

California Student Opportunity and Access Program is a program developed to increase the post-secondary enrollment of minority students by serving as a clearinghouse for educational information, providing academic support for students, and supplementing the school's counseling function.

Prerequisites for student selection into the program are interest in pursuing post-secondary educational goals and likelihood of benefiting from the program services. Students involved in Cal-SOAP are provided with such services as academic and career advising, assistance with college applications, campus visits, skill development classes, summer residential programs, test preparation workshops, and tutoring. Students involved in Cal-SOAP can remain in the program for a maximum of six years, but in practice they typically remain for only two or three years.

Cal-SOAP currently exists in 35 school districts in the state of California, and on 25 community college campuses, 13 California State University campuses, seven University of California campuses, and 14 additional independent institutions.

The California Readiness Program (CRP) is a college preparatory program that is a partnership between the California State University and the California Department of Education. CRP seeks to increase the enrollment and success of African-American and Latino students in ninth grade algebra and college preparatory English courses with eventual hopes of increasing the number of students attending college.

The main prerequisite for selection into CRP is an interest in attending college in the future. Students enrolled in CRP are provided with services such as California State University campus visits, cross-age mentoring and tutoring from CSU interns in mathematics and English, parental activities, problem solving instruction, and workshops provided to the family about the benefits of college attendance and the availability of financial assistance. This program involves ten school districts and five California State University campuses.

The California Early Academic Outreach Program (EAOP) is a college attendance program administered by the University of California, whose goal is to increase the number of minority students (African-American, Native American, and Latino) eligible for admission to the University of California system. The program aims to assist individual students to enroll in and complete college preparatory courses of study that eventually lead to eligibility for admission to the University of California by strengthening knowledge, motivation, and preparation for post-secondary education through individual and group activities with students, parents, and schools.

Program participants are middle/junior high school students who have the potential to benefit from services to achieve college eligibility and who are willing to take a prescribed sequence of courses. EAOP students who join the program can be served for a maximum of six years (grades 7 through 12). Some of the services available to the students include academic skills development, administrative and programmatic linkages between schools and the university, dissemination of information, motivational development, and participant identification and referral. EAOP exists in 176 school districts and at 8 U.C. campuses in California.

Middle College is a college attendance/high school dropout prevention program that aims to reduce the number of high-risk students with college potential who do not graduate from high school, and increase the number of students from this category who attend college. This program was patterned after a model created by La Guardia Community college in New York

(1988). Middle College brings the high schools and the community colleges together to form a partnership through which services are provided to the students.

Students enrolled in Middle College could be involved with the program for a total of three to four years. Services provided include academic, career, and personal counseling, career internship experience, classroom instruction, staff development, and tutoring. Participants include students with a history of truancy, low academic achievement, and counselor recommendation

Middle College is administered out of the office of the California Community College Chancellor. California participants involved in MC include the Los Angeles and Richmond Unified school districts, Contra Costa College, and Los Angeles Southwest College.

Categorization of Programs Reviewed

As noted earlier, an ideal program for this review would be one that was specifically designed to prevent dropping out of High School among Latino students (and had Spanish materials available), had been rigorously evaluated many times in elementary or middle schools serving many Latino students, and had been extensively replicated in such schools. However, few programs would meet all of these criteria. Table 1 summarizes the degree to which each of the programs reviewed met the various inclusion criteria. The Table is only a summary; see the program reviews for more detail on the characteristics, evaluation evidence, and replicability of each program.

Table 1: Categorization of Programs Reviewed

Program Name	Grades Served	Spanish Bilingual Focus	Meets Evaluation Criteria For Achievement	Evaluated With Latinos	Designed Specifically for Latinos	Widely Replicated
ALAS	7-12	yes	yes	yes	yes	no
AVID	9-12	no	partially	yes	no	yes
Coca Cola Valued Youth Project (VYP)	7-12	yes	yes	yes	yes	yes
GRAD	k-6	no	yes	yes	no	no
SCORE	9-12	no	partially	yes	no	no
Upward Bound	9-12	no	yes	yes	no	yes
CPEC Programs						
Mathematics Enrichment and Science Achievement (MESA)	7-12	no	no	yes	no	yes
Alliance for Collaborative change in Education School Systems (ACCESS)	6-12	no	no	yes	no	yes
California Academic Partnership Program	9-12	no	no	yes	no	yes
California Student Opportunity Program	7-12	no	no	yes	no	yes
California Readiness Program	9-12	no	no	yes	no	yes
California Early Academic Outreach Program	7-12	no	no	yes	no	yes
Middle college	9-12	no	no	yes	no	no

Conclusion

The six dropout prevention and college attendance programs that met our evaluation criteria, as well as the California Post Secondary Education Commission (CPEC) that did not, are very diverse in their interventions as well as their findings. Yet there are important commonalities among them as well. First, even accounting for mild to serious problems in experimental design (especially relating to problems of selection bias), it is clear that the six main programs revised can have a substantial impact on the dropout rates, college attendance rates, and other outcomes for Latino adolescents who are placed at risk. Second, while only four of the six (AVID, SCORE, Upward Bound and The Coca-Cola Valued Youth Program) have active dissemination programs, there is nothing inherent to any of these programs that would keep them from being disseminated broadly. They are expensive, but well within the means of our society, especially given the immediate costs to our society of high dropout rates and underused talent.

While the interventions themselves differ considerably, there are some common themes among them. One is personalization, trying to increase the holding power of the school by creating meaningful personal bonds between students and teachers and among students. Most of the programs use some sort of small group intervention and/or mentoring to enhance individual attachments to school. Another common element involves connecting students to an attainable future. For example, both Project GRAD and Upward Bound give students an experience on a college campus to make college seem more real and attainable. SCORE and AVID, among others, provide counseling to keep students prepare for college and occupations. Another common theme is targeted academic assistance, giving students help with specific courses with which they are struggling as well as more generic study strategies.

Finally, many of the programs attempt to give students status and recognition within the school for academic efforts. For example, the Coca Cola Valued Youth Program gives at-risk students an opportunity to tutor younger children, a high status, responsible role. AVID essentially places promising at-risk students in top track classes, with enough assistance to

succeed there. Finally, most programs recognize the importance of families in the school success of their children, and provide activities to engage parents' efforts in support of their children's achievement and school completion.

There is not enough evidence from studies of dropout prevention models to indicate which components of these comprehensive models is most effective or cost-effective. Yet it is clear that these are effective approaches to increasing the graduate rates and college attendance of Latino students. The existing successful approaches are intensive, comprehensive, and built around positive expectations for adolescents. They demonstrate that the problem of unacceptably high dropout rates among Latino students is one we can solve. There is much more we need to learn about these programs, but we already know enough to take action on this critical problem.

References

Burkheimer, G.J., Levinsohn, J.R., Koo, J.P., & French, A.M. (1976). Final Report: A study of the National Upward Bound and Talent Search Programs.

Burkheimer, G. J., Riccobono, J., & Wisenbaker, J., (1979). Final Report: Evaluation study of the Upward Bound Program--A second follow-up, (Research Triangle Park, N.C. Research Triangle Institute).

Cardenas, J. A., Montecel, M.R., Supik, J.D. & Harris, R.J. (1992). The Coca-Cola Valued Youth Program: Dropout prevention strategies for at-risk students. Texas Researcher, 3, (111-130).

Coca-Cola Valued Youth Program (1991). Proposal submitted to the Program Effectiveness Panel of the U.S. Department of Education. Washington, DC: U.S. Department of Education.

Council of Chief State School Officers (1990). School success for limited English proficient students: The challenge and state response. Washington, DC: Author.

Durán, R.P. (1994a). Hispanic student achievement. In M. Justiz, R. Wilson, & L. Bjork (Eds.), Minorities in higher education. Phoenix, AZ: Oryx Press.

Durán, R.P. (1994b). Cooperative learning for language-minority students. In R. DeVillar, C. Faltis, & J. Cummins (Eds.), Cultural diversity in schools. Albany, NY: SUNY Press.

Edgert. P., & Taylor, J.W. (1992). Final report on the effectiveness of intersegmental student preparation programs. The third report to the legislature in response to item 6420-0011-001 of the 1988-89 budget act. CA: California Post Secondary Commission. Sacramento, CA.

Educational Testing Service (1996). Dreams deferred: High school dropouts in the United States. Princeton, NJ: Author.

Ekstrom, R. B., Goertz, M. E., Pollack, J. M., & Rock, D. A. (1986). Who drops out of high school and why? Teacher's College Record, 87, 356-373.

Fashola, O., Slavin, R., Calderón, M., & Durán, R. (1996). Effective programs for Latino students in elementary and middle schools. Baltimore: Johns Hopkins University, Center for Research on the Education of Students Placed at Risk.

Fernández, R. R., & Velez, W. (1989). Who stays? Who leaves? Findings from the ASPIRA five cities high school dropout study Washington, DC: ASPIRA Institute for Policy Research.

Finn, J. D. (1989). Withdrawing from school. Review of Educational Research, 59, 117-142.

General Accounting Office (1994). Hispanics' schooling: Risk factors for dropping out and barriers to resuming education. Washington, DC: GAO.

Hayward, B. J., & Tallmadge, G. K. (1995). Strategies for keeping kids in school: Evaluation of dropout prevention and reentry projects in vocational education. Washington, DC: U.S. Department of Education.

Howe, C.K. (1994). Improving the achievement of Hispanic students. Educational Leadership, 51(8), 42-44.

Johnson, S.G. (1983). A survey of SCORE for College. Unpublished Masters Thesis. California State University, Fullerton.

Ketelsen, J. L. (1994). Jefferson Davis Feeder School Project. Houston, TX: Tenneco Corporation, Project GRAD.

Larson, K., & Rumberger, R. (1995). Doubling school success in highest-risk Latino youth: Results from a middle school intervention study. In R. F. Macias & R. Garcia Ramos (Eds.), Changing schools for changing students. Santa Barbara, CA: University of California at Santa Barbara.

Leighton, M.S., Hightower, A.M., & Wrigley, P.G. (1995). Model strategies in bilingual education: Professional development. Washington, DC: U.S. Department of Education.

Lockwood, A. T. (1996). Caring, community, and personalization: Strategies to combat the Hispanic dropout problem. U.S. Department of Education, Hispanic Dropout Project.

Losey, K.M. (1995). Mexican American students and classroom interaction: An overview and critique. Review of Educational Research, 65, 283-318.

MacArthur, E. R. (1993). Language characteristics and schooling in the U.S., a changing picture: 1979 and 1989. Washington, DC: National Center for Education Statistics.

Mehan, H. (1996). Contextual factors surrounding hispanic dropouts. Washington, DC: U.S. Department of Education, Hispanic Dropout Commission.

Mehan, H., Datnow, A., Bratton, E., Tellez, C., Friedlaender, D, & Ngo, T (1992). Untracking and college enrollment. National Center for Research on Cultural Diversity and Second Language Learning. Research Report: 4.

Mehan, H., Villanueva, I., Hubbard, L., & Lintz, A. (1996). Constructing school success: The consequences of untracking low-achieving students. Cambridge University Press New York, NY.

National Center for Education Statistics (1993a). Digest of education statistics. Washington, DC: U.S. Department of Education, NCES.

National Center for Education Statistics (1993b). Dropout rates in the U.S. Washington, DC: U.S. Department of Education.

National Center for Education Statistics (1995). The educational progress of Hispanic students. Washington, DC: U.S. Department of Education.

National Center for Education Statistics (1996). Dropout rates in the United States: 1994. Washington, DC: U.S. Department of Education.

BEST COPY AVAILABLE

National Diffusion Network (1995). Educational Programs That Work: The Catalogue of the National Diffusion Network. (21st Edition). Longmont, CO: Sopris West.

Opuni, K.A. (1995). Project GRAD: Program Evaluation Report. Houston: Houston Independent School District.

Orfield, G., & Monfort, F. (1988). Racial change and desegregation in large school districts. Washington, DC: National School Boards Association.

Romo, H.D., & Falbo, T. (1996). Latino high school graduation: Defying the odds. Austin: University of Texas Press.

Rumberger, R. W. (1987). High school dropouts: A review of issues and evidence. Review of Educational Research, 57, 101-127.

Rumberger, R. W. (1995). Dropping out of middle school: A multilevel analysis of students and schools. American Educational Research Journal, 32, 583-625.

Rumberger, R. W., & Larson, K. A. (1994). Keeping high-risk Chicano students in school: Lessons from a Los Angeles middle school dropout prevention program. In R. Rossi (Ed.), Schools and students at risk. New York: Teachers College Press.

Rumberger, R. W., & Larson, K. A. (1995, April). Toward explaining differences in school attrition among Latino language minority students. Paper presented at the annual meeting of the American Educational Research Association, San Francisco.

SCORE (1994). Proposal submitted to the Program Effectiveness Panel of the United States Department of Education. Washington, D.C.: U.S. Department of Education

Steinberg, L., Blinde, P. L., & Chan, K. S. (1984). Dropping out among language minority youth. Review of Educational Research, 54, 113-132.

Stern, D., Paik, I., Catterall, J. S., & Nakata, Y. (1989). Labor market experience of teenagers with and without high school diplomas. Economics of Education Review, 8, 233-246.

Swanson, M.C., Mehan, H., Hubbard, L. (1995). The Avid Classroom: Academic and Social Support for Low-Achieving Students. In Oakes, J., & Quartz K. H. (Eds) Creating New Educational Communities. Ninety-Fourth Yearbook of the National Society for the Study of Education. Part I.

Vasquez, J.A. (1993). Teaching to the distinctive traits of minority students. In K.M. Cauley, F. Linder, & J.H. McMillan (Eds.), Annual Editions: Educational Psychology 93/94. Guilford, CT: Dushkin Publishing Group, Inc.

Velez, W. (1989). High school attrition among Hispanic and non-Hispanic white youths. Sociology of Education, 62, 119-133.

Wells, J. (1981). SCORE. Final report presented for ESEA Title IVC. Sacramento: Presented to the California Department of Education.

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